



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,215	01/02/2004	So-hye Kim	1793.1148	6657
21171	7590	02/13/2008		
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER ZHU, RICHARD Z	
			ART UNIT 2625	PAPER NUMBER
			MAIL DATE 02/13/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/750,215

**Applicant(s)**

KIM ET AL.

**Examiner**

Richard Z. Zhu

**Art Unit**

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 8, 22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 22, and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) ✓
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination filed on 12/27/2007 under, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/26/2007 has been entered.

### *Response to Applicant's Arguments*

2. Applicant's arguments had been duly considered and they are not persuasive for at least the following reasons:

With respect to the applicant's argument that *Gabbe* does not disclose "the first setting of all pages of a document to multiple printing and then to selectively change the setting of one or more of those pages, having been set to the multiple printing, to be commercial printing", the examiner disagrees.

*Gabbe* discloses from Col 5, Row 65 to Col 6, Row 14, if "number-up" is specified without additional parameters, print symbiont 28 will print all of the pages in accordance to the "number-up" specified or "setting all of the plurality of pages of the document to be multiple printed". Furthermore, *Gabbe* discloses in Col 6, Rows 15-20 that the user can additionally specify, in addition to the "number-up" already specified for all of the pages, to at least print the first or the last page out of plurality of pages on a single sheet and only that

first or last page on that single sheet, or “selectively setting at least one page of the document, different from a corresponding setting of another page of the document, to be one of multiple printed and commercially printed”, see Col 6, Rows 18-19 “If the last page or the first page is specified, then a number of pages less than the parameter number-up will be printed”. For example, suppose the user designated “4-up” printing for all of the 10 pages to be printed and additionally specify that the first page and the last page are to be printed alone on a single sheet, then **Gabbe**’s printer will print pages 2-9 on two sheets with 4 pages per sheet whereas page 1 is printed alone or commercially on a 3<sup>rd</sup> sheet and page 10 is printed alone or commercially on a 4<sup>th</sup> sheet for a total of 4 sheets of paper used to print 10 pages of information. As such, **Gabbe** meets the limitation of selectively changing operation as well as that such changing is done after all pages are set for multiple printing.

The examiner disagrees with the applicant’s understanding of **Gabbe**. **Gabbe** discloses a printer that executes “multiple-up” and “regular or commercial” printing in accordance to user specification by at least allowing the user to specify a different way of printing the first and the last pages out of a plurality of pages designated for a conventional “multiple-up” operation.

With respect to the applicant's argument directed toward the rejections made under 35 USC 103(a), the examiner agrees that the hypothetical scenario of “a page with multiple pages printed thereon would be recognized as a single document” described on page 9, 4th paragraph after "REJECTION UNDER 35 USC 103" is possible. But this scenario does not negate the other scenario where each page transmitted might contain only one page thereon.

Furthermore, the examiner agrees with the applicant on the part that *Kohri* is a facsimile apparatus that receives image data differently from that of *Gabbe*. However, it is the examiner's assessment that because both *Gabbe* and *Kohri* discloses recording apparatus that enables a plurality of received pages to be printed on a single page in order to conserve paper, the two references are in the same field of endeavor.

At the very least, both references directed toward solving the same problem of "paper conservation" as acknowledged by the applicant on page 10, "Kohri et al. may conserve paper" and as such, one of ordinary skill in the art would look to *Kohri* when faced with a deficiency in *Gabbe* in an endeavor to improve the efficiency of "paper conservation". In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) (**"A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem."**); *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993); and *State Contracting & Eng 'g Corp. v. Condotte America, Inc.*, 346 F.3d 1057, 1069, 68 USPQ2d 1481, 1490 (Fed. Cir. 2003) (**where the general scope of a reference is outside the pertinent field of endeavor, the reference may be considered analogous art if subject matter disclosed therein is**

relevant to the particular problem with which the inventor is involved), see MPEP 2141.01 (a) [R-3].

Finally, *Kohri* does not need to teach what *Gabbe* already taught since *Kohri* is a modifying reference.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 8, 22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by *Gabbe et al.* (US 4928252 A).

Regarding Claim 1 and 8, *Gabbe* discloses printer (Fig 1 and see Col 4, Rows 34-44) implemented by a computer (Fig 1, Computer System 10 and see Col 4, Row 40. Computer system is properly interpreted to have a computer program on a computer readable medium that is used to execute the functions set forth within the computer program) using a multiple pages per side function (Fig 7, 9 pages on a single sheet), by which a document comprising a plurality of pages is printed using the N-up function of printing multiple pages on a sheet of paper (Fig 7, 9 pages on a single sheet) comprising: setting all of the plurality of pages of the document to be multiple printed (Col 5, Rows 57- Col 6, Row 21, the user set forth the parameter in which printing is to be

**executed whereas the computer will determine in Col 3, Rows 18-46 the proper setup of printing in accordance to user-defined parameters).**

**selectively changing a setting of at least one of the pages, from the plurality of pages set to be multiple printed, to be commercially printed (Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed commercially while remaining pages are printed in accordance to “multiple-up” specified);**

**determining whether a page to be printed is one of the pages set to be multiple printed (Col 6, Rows 14-21).**

**processing data of the page to be printed as data to be multiple printed in response to determining that the page to be printed is one of the pages set to be multiple printed (Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed).**

**processing data of the page to be printed as data to be commercially printed in response to determining that the page to be printed is not one of the pages set to be multiple printed (Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 6, Row 17 - Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed. As such, a determination is made by the program to separately processing the pages to be commercially printed from the pages to be multiple-up printed).**

printing a plurality of pages according to the processed data (Col 5, Rows 35-64).

Regarding Claim 22, *Gabbe* discloses a printing method (Fig 1 and see Col 4, Rows 34-44, printer implementing the following method) using a multiple pages per side (N-up) function (Fig 7, 9 pages on a single sheet) by which a document comprising a plurality of pages is printed using the N-up function of printing multiple pages on a sheet of paper (Fig 7, 9 pages on a single sheet), the method comprising:

selectively setting of at least one page of the document, different from a corresponding setting of another page the document, to be one of multiple printed and commercially printed (Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed commercially while remaining pages are printed in accordance to the “multiple-up” specified);

processing data of a first page (Col 6, Row 15-20, all pages other than the first and last pages are specified to be multiple printed), of the plurality of pages, to be printed as data to be multiple printed in response to determining that the page to be printed is set to be multiple printed (Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed);

processing data of a second page (Col 6, Row 15-20, the first and last pages are specified to be commercially printed), of the plurality of pages, to be printed as data to be commercially printed in response to determining that the page to be printed is



not set to be multiple printed (Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed) and printing the plurality of pages based respective processed page data (Col 5, Rows 35-64).

**Regarding Claim 24, *Gabbe* discloses**

selectively setting of at least one page of the document, different from a corresponding setting of another page the document, to be one of multiple printed and commercially printed (Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed commercially while remaining pages are printed in accordance to the “multiple-up” specified);

generating a page number for each of the multiple pages printed on the sheet of paper (Fig 7, page number or sequence is known by the printer and therefore it is generated); and

printing the page numbers along with the multiple pages on the sheet of paper (If printer can print all the received pages, then it can inherently print the page numbers).

*Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 USC 103 (a) as being unpatentable over *Gabbe et al. (US 4928252 A)* in view of *Kohri et al. (US 5959744 A)*.

Regarding Claim 2, *Gabbe* does not disclose the selective changing of the setting of the at least one of the pages to be commercially printed is based on a determination that the at least one of the pages has complex contents and forms.

*Kohri* discloses a method of multiple-up printing wherein a selective changing of a setting of at least one of the pages to be commercially printed is based on a determination that the at least one of the pages has complex contents and forms (Col 2, Rows 55-67, measuring data amount of one page, Col 3, Rows 25-30 comparison with a pre-determined amount to determine if it have simple contents, Col 5, Rows 61-68, multiple up printing if the page is of simple content, that is less than the predetermined amount of data. Furthermore, see last fig of Fig 9 where it is shown that page 3 is determined to be uncombinable with page 1 and 2 due to its size. Therefore, only page 1 and 2 can be printed. As such, in a scenario where it is determined that page 2 can not be combined with page 1 due to size, then page 1 will be commercially printed because it has complex

contents and forms that would not allow page 2 to be printed on the same page as page 1).

*Gabbe* and *Kohri* are combination because both are in the field of multiple-up printing.

It would've been obvious to one of ordinary skill in the art at the time of the invention to enhance the determination ability of the device of *Gabbe* with the determination capability of *Kohri* so as to determine how many pages are to be printed on a single page whereas the motivation would've been to "provide a recording apparatus which records image data without wastefully consuming recording sheets" (*Kohri*, Col 1, Rows 22-24).

Therefore it would've been obvious to combine *Gabbe* and *Kohri* to obtain the invention set forth in Claim 2.

*Conclusion*

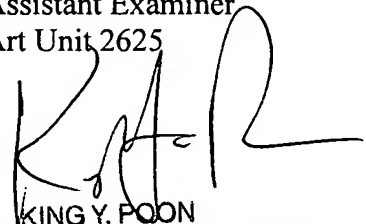
6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 7142327 B2, US 6894804 B2, US 6313919 B1, US 6175423 B1 discloses multiple—p image processing apparatus and methods that allow a user a degree of freedom in dictating the specifications of how multiple-up is to be executed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 6:30 - 5:00.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RZ<sup>2</sup>  
02/04/2008

Richard Z. Zhu  
Assistant Examiner  
Art Unit 2625

A handwritten signature in black ink, appearing to read 'K. Poon', is written over the printed name 'KING Y. POON'.

KING Y. POON  
SUPERVISORY PATENT EXAMINER